# 1. INTRODUCTION

## 1.1. Overview

A status review of all west coast salmon species initiated in 1994 by the National Marine Fisheries Service (Federal Register 1994) determined that summer chum salmon originating from Hood Canal and the eastern Strait of Juan de Fuca watersheds represented an Evolutionarily Significant Unit (ESU) (Johnson et al 1997). In March of 1999 the summer chum salmon ESU was considered to be at risk of extinction and listed as threatened under the Endangered Species Act (ESA) (16 U.S.C. Sec. 1531 et seq). The ultimate goal of the ESA is to recover threatened or endangered species. The ESA, in providing protection for a species at risk of extinction, also requires the development of a recovery plan for that species. Recovery is described as “the process by which the decline of a threatened or endangered species is arrested or reversed, and threats to its survival are neutralized, so that its long-term survival in nature can be ensured” (USFWS, 1992). Recovery planning under section 4 of the ESA can be keyed to habitat protection. A recovery plan is to include “site-specific management actions as may be necessary to achieve the plan's goal for the conservation and survival of the species” (§1533 (f) (1) (B)).

The Summer Chum Salmon Recovery Plan (the SRP) is ultimately intended to fulfill that ESA requirement and allow the appropriate Federal authorities to use the SRP in response to the ESA listing. Local and regional authorities within the Hood Canal and eastern Strait of Juan de Fuca watersheds desire to control and manage recovery in a manner that is compatible with their policies. They do not desire to form new processes or new organizations, but rather to provide an approach that takes advantage of existing processes, organization and political structures, and available data and information. Such an approach is intended to be responsive to the biological needs of the summer chum salmon in the context of local and regional political, economic, social, and legal realities.

In this context the Summer Chum Salmon Recovery Plan will provide a logic and rationale for recovery of summer chum salmon populations that can be understood by County Commissioners, Tribal governments, local and regional decision-makers and the public. The biology of the summer chum salmon and inherent biological productivity of the salmon habitats will provide the basis for the action alternatives that are described. The action alternatives will be driven by political feasibility, opportunity, ability, and willingness. The design of this SRP fosters participation and input from the appropriate land use and Tribal authorities. Development of the SRP engaged these authorities at multiple levels and provides them with guidance and direction in developing salmon recovery policies and regulations.

It is the intent of this SRP to be formally adopted by the three member Counties and the two member Tribes of the Hood Canal Coordinating Council. The

Counties will then be able to use this SRP to assist them in addressing regulatory aspects of habitat protection. Potential regulatory avenues for action might include Growth Management, Critical Areas Ordinances, and Shoreline Master Programs. However, the intent of this SRP is not to recommend sweeping regulatory solutions. The intent of this SRP is to craft specific 'packages' of solutions that may or may not include regulatory components, depending on each specific local habitat situation, the availability of alternative courses of action, and the political and economic feasibility of a regulatory solution.

Currently available technical work and information provides the basis for this SRP. On-going recovery actions and research will be incorporated as they become available within an adaptive management approach. Significant bodies of work have contributed to the development of this SRP, including the Summer Chum Salmon Conservation Initiative, Limiting Factors Assessments (WRIA's 14, 15, 16, 17 and 18), and refugia studies prepared for Jefferson and Kitsap Counties. The SRP proposes means by which the work being pursued by WRIA planning units under RCW 90.82 (the "2514 process") can be coordinated with the actions proposed for summer chum salmon recovery. Action recommendations are also coordinated with the HCCC's Lead Entity Salmon Habitat Recovery Strategy.

### 1.2. The Hood Canal Coordinating Council and its Role in Salmon Recovery Planning

The Hood Canal Coordinating Council (HCCC)[1] is a watershed based Council of Governments that was established in 1985 in response to concerns about water quality problems and related natural resource issues in the watershed. It was incorporated in 2000 as a 501(c)3, Public Benefit Corporation under RCW 24.03. It is made up of a Board of Directors of Regular Members (the County Commissioners from Jefferson, Kitsap and Mason Counties and elected Tribal Council Members from the Skokomish and Port Gamble S'Klallam Tribes.) It also has a slate of Ex-Officio Board Members (composed of representatives from State and Federal Agencies.) The Council also has Cooperating Partners who work with it on various projects and programs (volunteer groups, regional fisheries enhancement groups, conservation districts, land trusts, etc.). The HCCC's dual missions are:

> *"The Hood Canal Coordinating Council recognizes Hood Canal as a national treasure and will advocate and implement locally-appropriate actions to protect and enhance the Canal's special qualities."* (Adopted in 1992) and

[1] For more information about the Hood Canal Coordinating Council see http://www.wa.gov/hccc.

> *"To assure the existence of wild salmon in Hood Canal for the next 150 years, the Hood Canal Coordinating Council will: understand the causes of the decline of salmon in the Canal; identify the values and choices to be made in the natural, economic, legal, social, and cultural environments of salmon; develop and choose appropriate responses; and implement actions to maintain natural populations of salmon stocks at self-sustaining levels for ceremonial, subsistence, recreational and commercial fisheries."* (Adopted in 1996)

In 2002 the HCCC took the lead in the development of this Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Salmon Recovery Plan. In 2005, the HCCC was statutorily designated as the regional recovery organization for Hood Canal Summer Chum.[2] This recovery work is part of the State of Washington's regional recovery planning effort for ESA listed species under the Governor's Plan, *Extinction is not an Option*.[3] It is funded through the Salmon Recovery Planning Grant Program. The Salmon Recovery Funding Board (SRFB)[4] established the Salmon Recovery Planning Grant Program. HCCC is also the designated Lead Entity for the Hood Canal watershed charged with the coordination of salmon recovery projects from counties, cities, conservation districts, tribes, environmental groups, business interests, landowners, citizens, volunteer groups, regional fish enhancement groups, and other habitat interests.

### 1.3. Geographic Description of the Summer Chum Salmon Recovery Planning Area

The Hood Canal Summer Run Chum Salmon ESU, as determined by the National Marine Fisheries Service (NMFS), includes summer-run chum salmon populations that naturally spawn in tributaries to Hood Canal and in Discovery Bay, Sequim Bay, and the Dungeness River on the Strait of Juan de Fuca (Johnson et al 1997). Figure 1 presents the entire ESU as determined by NMFS.

[2] See Engrossed Substitute House Bill 2097.
[3] For information see www.governor.wa.gov/gsro/strategy/longversion.htm.
[4] For information on the Salmon Recovery Funding Board see http://www.iac.wa.gov/srfb/.

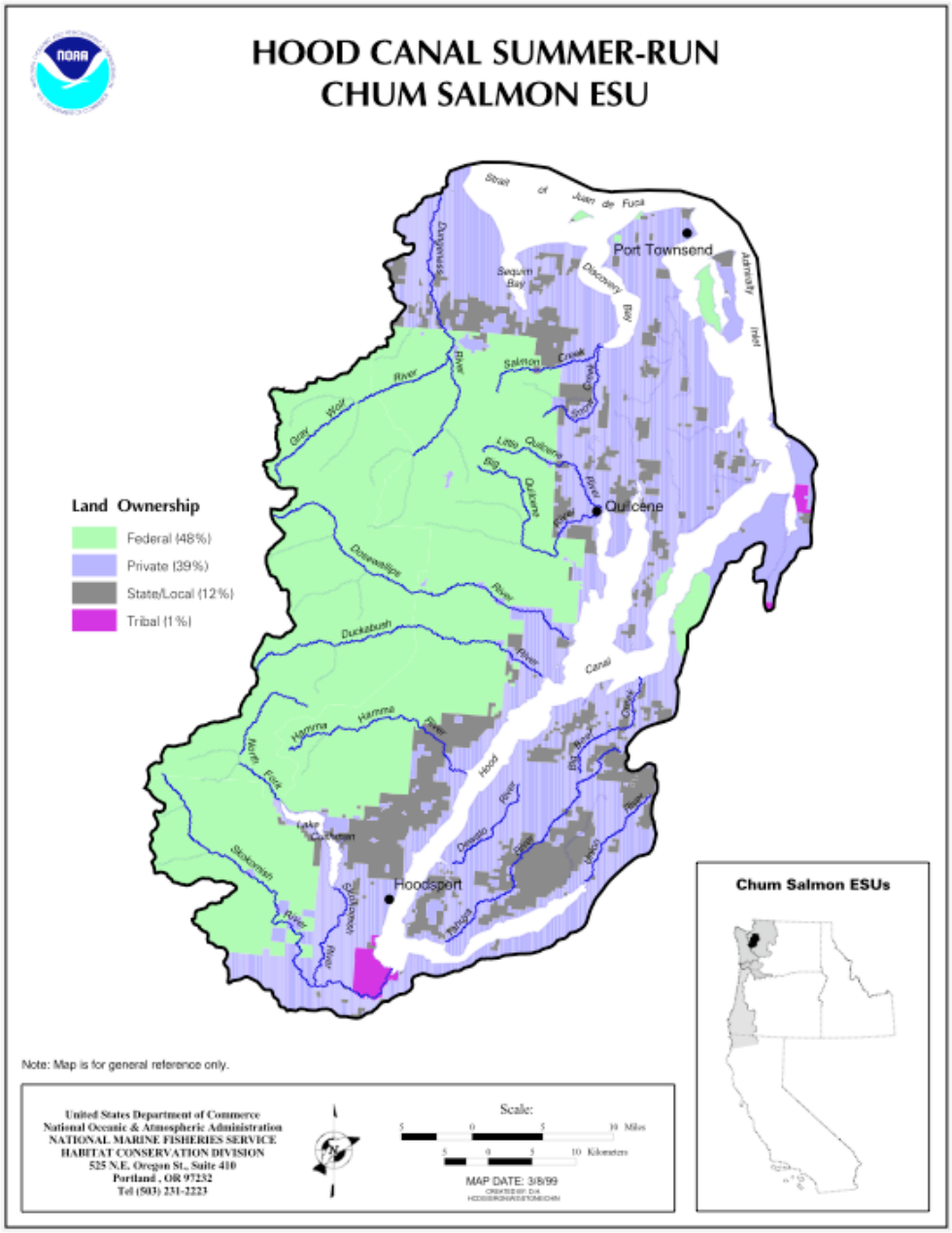


**Figure 1.** Hood Canal Summer-Run Chum Salmon ESU as determined by NMFS http://www.nwfsc.noaa.gov/trt/trt_puget.htm.

The Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Salmon Recovery Planning area includes portions of Jefferson, Mason and Kitsap Counties, the eastern portion of Clallam County; the reservations of the Skokomish, Port Gamble S'Klallam and Jamestown S'Klallam Tribes; and portions of Water Resource Inventory Areas (WRIA) 14, 15, 16, 17, and 18. Figure 2 presents the Summer Chum Salmon Recovery Planning Area.

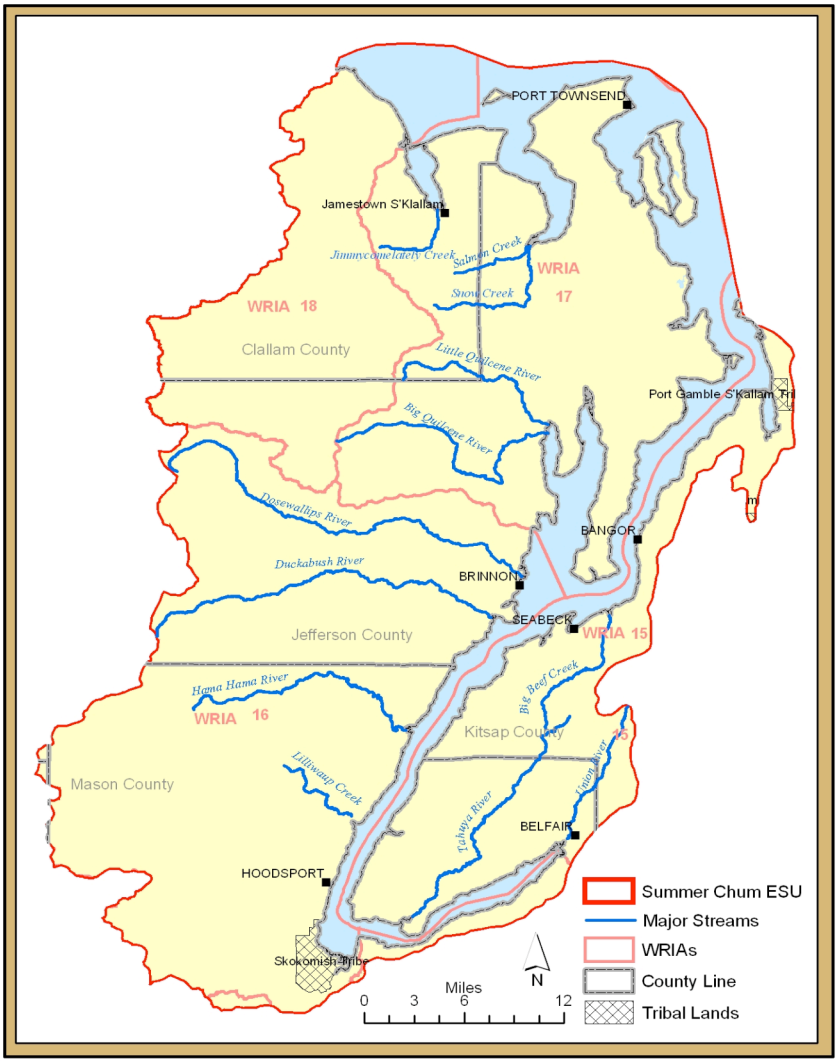


**Figure 2.** Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Salmon Recovery Planning Area. Map developed by Gretchen Peterson, PetersonGIS.

## 1.4. The Audience of the Summer Chum Salmon Recovery Plan

Four counties comprise the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Salmon ESU: Mason, Jefferson, Kitsap, and Clallam. Under State law, counties have the land use authority that impacts summer chum salmon habitat. It is the intent of this SRP to provide the information so that the counties can manage their respective regulatory programs in a manner that is consistent with summer chum salmon recovery. The Summer Chum Salmon Recovery Plan provides analyses and action alternatives that are possible under the authorities of county policies and programs. County staffs have contributed to the development of the analyses provided and the action alternatives described. Each Board of County Commissioners will adopt the recommendations and action alternatives presented according to their respective policies and procedures. The Counties will also use the SRP as guidance in the development, modification and revisions of their respective regulatory programs related to the Growth Management Act and Shoreline Programs. Where applicable, public review processes will be undertaken by the Counties to allow the public to provide input and guidance for the Boards of County Commissioners as they deliberate the recommendations and develop regulatory policies and programs that support the recovery of summer chum salmon in Hood Canal and the Eastern Strait of Juan de Fuca.

The Skokomish and Port Gamble S'Klallam Tribes are voting members of the Hood Canal Coordinating Council and have Usual and Accustomed fishing areas within the boundaries that encompass the Hood Canal/Eastern Strait of Juan de Fuca ESU. Other Tribes with usual and accustomed fishing rights within the boundaries of that encompass the ESU include the Suquamish, Jamestown S'Klallam and Lower Elwha Klallam. Fisheries harvest and hatchery management for the Hood Canal and the eastern Strait of Juan de Fuca watersheds are the direct responsibility of these Tribes and the Washington State Department of Fish and Wildlife (WDFW). The Point No Point Treaty Tribes (Skokomish, Port Gamble S'Klallam, Jamestown S'Klallam, and Lower Elwha Klallam) and WDFW are the primary authors of the Summer Chum Salmon Conservation Initiative (SCSCI) and subsequent supplemental reports (WDFW and PNPTT 2000). The fishery co-managers, WDFW and PNPTT (hereafter as co-managers) have participated in the development of aspects of this SRP and it is designed to be supportive of and compliment the co-managers fisheries and interim salmon recovery goals and objectives.

The Federal government, in particular NMFS, is ultimately responsibility for the preparation of a recovery plan under the ESA. One of the primary intents of this SRP is for NMFS to adopt it as the recovery plan for the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum ESU. This SRP contains the required elements for a recovery plan under the ESA (§ 1533 (f)(1)(B).) Those elements are: 1) objective, measurable criteria for determining when delisting is warranted; 2) a comprehensive list of site-specific management actions necessary to

achieve the SRP's goal for recovery of the species; and 3) an estimate of the cost and time required to carry out those actions. As a sanctioned recovery plan State and Federal agencies and departments can use it as guidance in developing programs that support summer chum salmon recovery. The State Legislature and Congress will have a vehicle to assess the efficacy of their mandated salmon recovery policies and provide for the necessary and appropriate funding to assure success.

## 1.5. Relationship to Other Salmon Recovery Planning Processes

A multitude of efforts and processes are in place that has some relationship to salmon recovery planning in Washington State.

### 1.5.1. The Salmon Recovery Lead Entity Process (RCW 77.85)

Chapter 77.85 RCW established an organizational framework to guide and implement salmon recovery through salmonid habitat restoration and protection. Chapter 77.85 RCW further authorizes counties, cities, and tribal governments to voluntarily join and designate a Lead Entity responsible for submitting habitat project lists to the Salmon Recovery Funding Board (SRFB) for their funding consideration. HCCC is the designated Lead Entity for the Hood Canal watershed charged with the coordination of salmon recovery projects from counties, cities, conservation districts, Tribes, environmental groups, business interests, landowners, citizens, volunteer groups, regional fish enhancement groups, and other habitat interests. As the Lead Entity, HCCC Staff, in conjunction with the various groups interested in salmon recovery for the Hood Canal watersheds, have developed a Lead Entity strategy (HCCC 2004) to guide the prioritization and selection of habitat restoration projects.[5] That Lead Entity strategy was recently revised to reflect new information and provide more specific guidance for restoration projects. The development of this Summer Chum Salmon Recovery Plan was done in conjunction with that Lead Entity strategy. Details of projects proposed for this SRP can be found in the Lead Entity strategy.

### 1.5.2. Co-managers Summer Chum Salmon Planning Process

As mentioned in section 1.4 above, the co-managers (in this case WDFW and the PNPTT) are the primary authors and participants in a related planning process known as the Summer Chum Salmon Conservation Initiative (SCSCI) (WDFW and PNPTT 2000). The SCSCI process, initiated in 2000 is an on-going planning forum and mechanism by which the co-managers are engaged in the development and implementation of harvest management regimes and supplementation programs. These regimes and programs are designed to

[5] For more information and a downloadable copy of the HCCC Lead Entity strategy see http://www.wa.gov/hccc/salmon.htm

provide opportunities for the recovery of summer chum salmon when integrated with aspects of habitat protection and restoration. The SCSCI process is iterative and evolves as new information is gathered and knowledge of summer chum salmon is enhanced. Annual reviews are documented in supplemental reports which describe and summarize the details of both the harvest management actions taken for the past fishing season and on-going supplementation programs. The co-managers interim recovery goals and thresholds (to be described in more detail in section 2 below) were developed as part of the SCSCI process. Five year annual reviews are scheduled which will look comprehensively at summer chum salmon recovery efforts. The first five-year review is scheduled to be published by the co-managers in late 2005.

The SRP should be considered an extension of the SCSCI, WDFW and PNPTT (2000) and subsequent supplemental reports, WDFW and PNPTT 2003 and PNPTT and WDFW 2003. These reports, developed as part of the SCSCI process, can be found at http://wdfw.wa.gov/fish/chum/chum.htm. The SCSCI provides extensive details regarding harvest management, hatchery supplementation programs, and interim recovery goals and thresholds. The SCSCI also considers habitat restoration and provides a basis for the development of the habitat projects and recovery actions presented in this SRP.

### 1.5.3. The Watershed Planning Process (RCW 90.82)

Chapter 90.82 RCW provides a process to plan and manage water resources in designated water resource inventory areas (WRIAs). Each WRIA under this process has established Planning Units, comprised of groups of governmental and non-governmental entities to perform two tasks: 1) determine the status of water resources in a watershed and 2) resolve the often conflicting demands for that water, including ensuring adequate supplies for salmon.[6] The WRIA Planning Units are to develop a watershed plan that accomplishes these tasks. RCW 90.82 further states that the watershed plan shall be coordinated or developed to protect or enhance fish habitat in the management area. Watershed plans are to be integrated with strategies, developed under other processes, to respond to potential and actual ESA listings of salmon and other fish species.

Watershed plans as part of the RCW 90.82 mandate are being developed in each of the WRIA's that encompass Hood Canal and the Eastern Strait of Juan de Fuca. WRIAs 15[7] and 16 are in the process of developing watershed plans and are near completion. WRIA 16, under a mutual agreement between WRIAs 14 and 16, includes the northern portion of WRIA 14 that drains into Hood

[6] See RCW 90.82.
[7] Information regarding the WRIA 15 watershed plan can be found at http://www.ecy.wa.gov/watershed/15.html

Canal.[8] The initial WRIA 17 watershed plan is complete[9]. Under an agreement with WRIA 18, planning for the Sequim Bay sub-basin will be done through the WRIA 18 process. As a result, the WRIA 18 recommendations for water quality, water quantity, instream flows, and habitat restoration and protection are presented in the WRIA 17 watershed plan for this sub-basin (WRIA 17 2003). The Dungeness-Quilcene Plan, completed in 1994, provides for watershed planning in the Eastern Strait of Juan de Fuca and the Clallam County portions of the summer chum ESU.[10]

The summer chum salmon recovery planning process has used information from the watershed planning processes of each of WRIAs 15, 16, 17 and 18. Analyses and recommendations that have resulted from the watershed planning processes have been referenced and incorporated as appropriate and relevant. It is also the intent of this Summer Chum Salmon Recovery Plan to allow the resulting analyses and recommendations regarding habitat restoration and management to be made available for use by the watershed planning processes.

### 1.5.4. Other ESA-listed Salmon Recovery Planning Efforts

Two other species that inhabit the Hood Canal and eastern Strait of Juan de Fuca environs are also listed under the ESA. Chinook salmon originating from two populations identified in the NMFS designated Hood Canal region are listed as threatened as part of the Puget Sound Chinook ESU (Federal Register 1999a). For the Hood Canal and eastern Strait of Juan de Fuca watersheds, the US Fish and Wildlife Service has identified two core bull trout populations. Those populations are located in the Dungeness and Skokomish River watersheds. They are also listed as threatened under the ESA. (Federal Register 1999b).

#### 1.5.4.1. Relationship to Puget Sound Chinook Salmon Recovery Planning

Chinook salmon spawning in streams of Hood Canal are part of the Puget Sound Chinook ESU that has been listed as threatened under the ESA. The Puget Sound Technical Recovery Team (TRT) has described the Hood Canal Chinook geographic region as one of five geographic regions of diversity and risk. Evaluation of ESU-wide recovery scenarios will consider the Hood Canal geographic region. Two independent populations of chinook salmon have been tentatively delineated for the Hood Canal Geographic Region by the TRT. One of the recognized populations includes those that naturally reproduce in the Skokomish River watershed. The other independent population is a grouping of the stocks that spawn in the Hama Hama, Duckabush, and Dosewallips

[8] Information regarding the WRIA 16 watershed plan can be found at http://www.ecy.wa.gov/watershed/16.html
[9] Information regarding the WRIA 17 watershed planning can be found at http://wria17.co.jefferson.wa.us/.
[10] To download a copy of the Dungeness-Quilcene plan see http://www.ecy.wa.gov/biblio/94wrmp1718.html

watersheds with the Dosewallips River being the likely primary population or source for this grouped population.[11]

Hood Canal chinook salmon populations and their associated habitats, however, present unique and potentially challenging scenarios for recovery efforts and commitment. The status of chinook salmon stocks in Hood Canal is confounded by a long history of artificial introduction and production of stocks into Hood Canal systems, severely degraded habitat conditions, and an extremely complex hydroelectric relicensing process. The TRT recognizes the problems with available data in the determination of independent populations for the Hood Canal region. The TRT recommends that further investigations into the population structure of Hood Canal chinook be conducted (PSTRT 2001).

Some aspects of chinook salmon harvest relative to the incidental harvest of summer chum salmon are addressed in the Summer Chum Salmon Conservation Initiative (WDFW and PNPTT 2000). The analysis conducted by the co-managers is summarized in, section **4. HARVEST**, of this SRP. It is likely that recovery actions designed and implemented for summer chum salmon will also benefit chinook salmon in Hood Canal, especially work expected to occur in the lower watersheds and marine nearshores of Hood Canal. The Summer Chum Salmon Recovery Plan, however, will not provide an analysis of the benefits for Hood Canal chinook. Such benefits will be speculative until such an analysis can be performed.

#### 1.5.4.2. Relationship to Bull Trout Recovery Planning

Within the Summer Chum Salmon Recovery Planning Area, the US Fish and Wildlife Service (USFWS) has identified core bull trout populations within the Skokomish River and Dungeness River systems (USFWS 2004). These core populations are part of the Olympic Peninsula Management Unit as designated by USFWS (USFWS 2004). USFWS has provided technical guidance to address recovery planning for bull trout populations (USFWS 2002 and USFWS 2004). It is also likely that recovery actions designed and implemented for summer chum salmon will also benefit bull trout in Hood Canal. The Summer Chum Salmon Recovery Plan, however, will not provide an analysis of the benefits for bull trout. Such benefits will also be speculative until such an analysis can be performed.

#### 1.5.4.3. Shared Strategy for Puget Sound (SSPS)[12]

The main focus of SSPS is the development of a recovery plan for the Puget Sound chinook salmon ESU. Geographically, the summer chum salmon ESU is embedded within the Puget Sound chinook ESU area. ESA stipulates that a

[11] To download the current version of the document, "Independent Populations of Chinook Salmon in Puget Sound", please see http://www.nwfsc.noaa.gov/trt/trt_puget.htm.
[12] For more information on the SSPS process see http://www.sharedsalmonstrategy.org/

recovery plan be developed for each listed species. The Summer Chum Salmon Recovery Plan will focus on summer chum salmon. Recovery actions and strategies proposed will be expected to benefit other ESA-listed species (see section 1.5.4.1 for Hood Canal Chinook and section 1.5.4.2 for bull trout within Hood Canal). The intent of this SRP is to be a "stand-alone" plan that addresses issues related to Summer Chum Salmon Recovery Planning.

## 1.6. Organization of the Summer Chum Salmon Recovery Plan

The Summer Chum Salmon Recovery Plan will first describe its goals, drawing from the goals and objectives articulated by the co-managers in the Summer Chum Salmon Conservation Initiative (WDFW and PNPTT 2000) and the goals of the members of the HCCC. This section will also include guiding principles of conservation biology and the precautionary principle. Next, it will provide a description of the strategic approach and management strategy that is being used. This section will include a discussion of the viability analyses and population identification being considered by the TRT for summer chum salmon. Also included will be a summary of the co-managers' interim recovery goals and targets for summer chum salmon. The co-managers' interim goals provide the basis for analysis of those factors that contribute to the decline of summer chum salmon and the recovery actions that are needed. Sections summarizing both harvest and hatchery aspects of summer chum salmon are also provided. The SRP delineates six distinct geographic areas or "Conservation Units" to organize the analyses and for the development of recovery actions. The SRP then describes summer chum salmon recovery at the ESU-scale. A monitoring program to provide an evaluation of those recovery actions is articulated in this SRP. An adaptive management process that examines the integration of the H's (harvest, habitat, and hatcheries) is also discussed. A periodic review that utilizes the results of the monitoring and adaptive management processes is prescribed in this SRP. Finally, a section regarding aspects of implementation, including estimates of costs and desired commitment, is provided.